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To	Company	Fax Number	Phone Number
1. Examiner Thomas R. Hannon	USPTO – GAU 3656 Re: 10/566,956 Confirmation No. 9411	1-571-273-7104	

Date	Client/Matter Number
April 25, 2011	KAM 22.375 (100799-00124)
From	**Attorney Email Address**
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Total number of pages, including cover letter:7
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** EXPEDITED PROCEDURE**

Enclosed:

1 page – COVER LETTER

5 pages – SUMMARY OF ARGUMENTS TO BE PRESENTED DURING TELEPHONIC INTERVIEW

Comments –

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April 25, 2011

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Examiner Thomas R. Hannon
U.S. Patent & Trademark Office
Alexandria, VA 22313-1450

Re: U.S. Patent Application No.: 10/566,956
Our Ref. No.: KAM 22.375 (100799-00124)

Dear Examiner Hannon:

Thank you for agreeing to schedule an Interview. Enclosed please find a copy of a Draft Remarks serving as guidance for the interview scheduled for Thursday April 28 at 2:00 pm via telephone.

Absent instructions to the contrary, I will contact you at 571.272.7104.

I can be reached at 212.940.6489.

If you have any questions, please feel free to contact me.

Very truly yours,

Hassan Abbas Shakir,
Reg. No. 53922

HS:fd
Enclosures

Attorney Docket No.: KAM 22.375 (100799-00124)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	Akira TAKAHASHI
Confirmation No.:	9411
Serial No.:	10/566,956
Filed:	March 21, 2008
Title:	**SHELL-TYPE NEEDLE ROLLER BEARING**
Examiner:	Thomas R. HANNON
Group Art Unit:	3656

April 25, 2011

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

REMARKS

The following remarks serve as a basis for discussion in an interview. The claims are repeated solely as a convenience. No claim amendments are proposed.

In the Claims:

1. (previously presented) A shell-type needle roller bearing comprising:

a shell with both axial end portions of a cylinder portion bent radially inwards to forms a pair of inward flange portions; and

a plurality of needles which are provided so as to roll freely on a radial inside portion of the cylinder portion between inside surfaces of both inward flange portions, without being retained by a cage, in a state where they are directly adjacent and facing or in contact with the rolling surfaces of circumferentially adjacent needles,

wherein the inside surfaces of both inward flange portions make up inclined surfaces which are inclined in a direction where a distance between the surfaces becomes narrower towards the radial outward direction, of both axial end surfaces of the needles, a portion nearer the center than a beveled portion on an outer peripheral portion, is shaped such that it does not project axially outwards more than an inner peripheral edge of the beveled portion, and in a state where the needles are displaced in the axial direction, contact portions between both axial end surfaces of the needles and the inside surfaces of the inward flange portions are positioned at portions close to the radial outside of the inward flange portions; and

wherein the angle of the inside surface of on of the both inward flange portions which has a flexural concave portion formed at a base end section thereof and depressed from an inner peripheral surface of the cylinder portion, with respect to a virtual plane which exists in a direction orthogonal to a central axis of the shell, is larger than the angle of the inside surface of the other inward flange portion on the opposite side which has no flexural concave portion with respect to the virtual plane.

2. (Original) A shell-type needle roller bearing according to claim 1, wherein an angle of the inside surfaces of both inward flange portions with respect to a virtual plane which exists in a direction orthogonal to a central axis of the shell, is 3 to 20 degrees, and at both axial end surfaces of the needles, a portion nearer the center than the beveled portion is a flat surface.

3. (previously presented) A shell-type needle roller bearing according to claim 1, wherein in relation to the radial direction of the shell, a distance between an inner peripheral edge of both inward flange portions and an inner peripheral surface of the cylinder portion, is made smaller than a diameter of the cross section of the needles, and larger than 1/3 of the diameter.

4. (previously presented) A shell-type needle roller bearing according to claim 1, wherein the needles are affixed to an inner peripheral surface of the shell using grease.

REMARKS

Claims 1-4 are pending.

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,976,551 to Scharting in view of U.S. Patent No. 4,318,574 to Nakamura. Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Scharting, Nakamura and in view of U.S. Patent No. 3,501,210 to Deutsch.

Nakamura is cited at 4:53-58 for teaching a structure where one flange has a larger angle than the other. OA at 4. Applicant respectfully disagrees.

Nakamura discloses a structure where one guide surface 7 includes two faces: a first tapered annular face 7a and a second tapered annular surface 7b, as evidence by Fig. 2. These have different inclination angles θ_1, θ_2 from each other. This differs from the above technical idea of the presently claimed invention

> *wherein the angle of the inside surface of one of the both inward flange portions which has a flexural concave portion formed at a base end section thereof and depressed from an inner peripheral surface of the cylinder portion, with respect to a virtual plane which exists in a direction orthogonal to a central axis of the shell, is larger than the angle of the inside surface of the other inward flange portion on the opposite side which has no flexural concave portion with respect to the virtual plane.*

In the presently claimed invention, one angle of the inside surface of one of the both inward flange portions which has a flexural concave portion is larger than the angle of the inside surface of the other inward flange portion on the opposite side which has no flexural concave portion with respect to the virtual plane. Nakamura teaches angles measured relative to the same side.

Nakamura is also cited for teaching at 4:53-58 that the angles of the taper surface can be freely selected from a range of angles depending upon the loading et al. OA at 4. Applicant respectfully disagrees.

However, Nakamura does not disclose differentiating the angle of one tapered surface from that of the other. In Fig. 1 of Nakamura, the same numeral is given to the two tapered surfaces 7 which is formed on the opposite sides in the axial direction of the bearing 4 and these surfaces are depicted as having the same angle.

Therefore, one skilled person in the art would not achieve the structure of the present invention only referring to Nakamura and only the structure where the two tapered surfaces having the same angle can be adopted even when each of the tapered surfaces have two faces which have different angles from each other, unless the specific suggestion is provided. Nakamura fails to describe a reason why differentiating the angle of one tapered surface from that of the other.

With respect to claim 2, the rejection avers states that the tapered angles can be selected from a range of 3 to 20 degrees referring to Nakamura. OA at 5.

However, Nakamura discloses that the angle θ_1 of one face on the outer side of one guide surface 7 is 5' to 60' (5 minutes to 60 minutes) and the angle θ_2 of another face on the inner side of the one guide surface 7 is 10' to 120' (10 minutes to 120 minutes). 4:56-58. On the other hand in claim 2, the angle of 3 to 20 degrees corresponds to that of 180 to 1200 minutes, which do not overlap the values disclosed in Nakamura. Therefore, the present invention described in Claim 2 is not suggested by Nakamura.